

species was introduced appears to be uncertain, but the popular belief held throughout the Southern States, namely that the plant was brought into that section during the Civil War period, is erroneous, although it was doubtless then disseminated in various sections where it had not been before observed. The late Professor Porter found it thoroughly naturalized in middle Georgia as early as 1846 while he was a resident of that state. Its advent was probably unnoticed by the native residents on account of the relative inconspicuousness of the plants, and how long previous to 1846 the plant may have been established as a member of our flora Professor Porter was not able to learn.

During the first half of the last century the plant seems to have spread slowly; however, during the second half, it advanced north, northwest, and west, apparently establishing itself permanently wherever it gained a foothold.

On account of local means of dispersal *Lespedeza striata* spread westward more rapidly than northward. The end of the last century saw it established in Texas, Kansas, and Illinois, while it was not until the beginning of the present century that it got a firm hold in southern Pennsylvania.

The geographical range for the species given in the several floras within whose limits it occurs are too narrow, and should read Pennsylvania to Kansas, Florida, and Texas.

J. K. SMALL

## REVIEWS

### Ganong's Teaching Botanist\*

Progressive teachers of botany already possess well worn copies of the first edition of this pioneer contribution to the pedagogy of their subject. The second edition, "rewritten almost throughout", is brought abreast of the advance of the past decade in botanical education, and will, no doubt, be even more warmly welcomed than was the first edition.

The title not only names the book, but designates the class of readers to whom it is addressed, and to whom it will make its

\*The Teaching Botanist. By William F. Ganong, Ph.D. Second edition. Pp. xi + 439; plates 2; figures 40. \$1.25. The Macmillan Co., New York. 1910.

strongest appeal. The book will not commend itself to that type of university professor who regards research and the direction of it as the chief end of man, and his teaching as only a necessary evil, essential in order to hold his position and justify his salary. Undoubtedly the pendulum has reached the end of its swing in this direction, and there has already begun a return to the more stable and desirable condition where efficient teaching of the science is regarded, not only as worth while for its own sake, but absolutely essential to the greatest growth and development of the science.

That there are at present more vacancies in botanical positions in the United States than there are competent men to fill them, is due in large measure to the fact that a more than amateurish presentation of introductory and even advanced courses by men absorbed in research, and "teaching" under protest, has failed to make a strong appeal to young men and women of ability. It is not, for a moment, meant to be here implied that research should be considered as secondary in importance to teaching, nor that some men should not give all their time and energy to investigation, nor that it would not be an educational blunder for some men to engage in the instruction of beginning classes rather than in enlarging the boundaries of our knowledge. But, on the other hand, it is maintained, as emphatically as possible, that teaching should not be considered as secondary in importance to research; and that one who devotes his time and talents to the problems and needs of botanical education should no longer be considered to have "done nothing" in his position.

It is an almost self-evident truth that the teacher should have the spirit of research, but if his inclinations lead him to make a contribution to the improvement of botanical education this should be considered by every one interested in any phase of botany as important and valuable a service as the discovery of a new chromosome or a new mendelian ratio.

The writer believes that there is no error more widespread or more erroneous than that knowledge of a subject, alone and of itself, confers teaching power or is the sole need in the preparation of a teacher. "The Teaching Botanist" is a protest against this

point of view, and a positive, constructive contribution toward the solution of the problem of more effective botanical teaching.

Chapter I. should be learned by heart and taken to heart by every earnest teacher. The chapter-headings are substantially the same as those in the first edition, while the appendix includes the "Unit Course in Botany Formulated by a Committee of the Association of Colleges and Secondary Schools of the North Central States", as well as the "Course of the Botanical Society of America and the College Entrance Examination Board".

Teachers of all grades, experienced and inexperienced, cannot fail to derive both profit and inspiration from this admirable volume.

C. STUART GAGER

THE BROOKLYN BOTANIC GARDEN

## OF INTEREST TO TEACHERS

### SOME FALLACIES OF BOTANY TEACHERS

Among the fallacies enumerated by Joseph Y. Bergen in *School Science and Mathematics* for December, 1909, the following paragraphs seem of special interest.

"There is beginning to be a vigorous demand, perhaps most noticeable in parts of the middle west, for a highly 'practical,' *i. e.*, economic, kind of instruction in botany and zoölogy. It is felt that, for one thing, the teaching should be so shaped as to make use of the commonest garden and field plants to illustrate plant anatomy and physiology. Of course no teacher in his senses would hunt up a rare greenhouse orchid to demonstrate a point which could be equally well shown by the use of a garden lily, a hyacinth, or an onion. But, \* \* \* there is a very specious fallacy in the unqualified insistence on the use of common material. \* \* \* The cabbage is a most familiar plant, therefore let us make stomata easy for him by giving him cabbage leaves to histologize. Now a single trial would convince any unbiased teacher that the familiar cabbage leaf is not nearly as easy a subject for the study of stomata as are easily peeled leaves, like those of the iris, or firm ones for cross sectioning, like those of